

Professor Andrew Ewer MB ChB, MD, MRCP, FRCPCH

Professor in Neonatal Medicine

Reproduction, Genes and Development

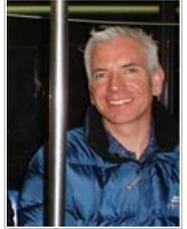
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About

Andrew Ewer is Professor of Neonatal Medicine based at Birmingham Women's Hospital.

Andrew has published research papers in scientific journals as well as reviews and an undergraduate problem-based learning book in the field of Paediatrics and Neonatology. He has received grants from NIHR Health Technology Assessment, NIHR Efficacy and Mechanism Evaluation and Action Medical Research.

He led the PulseOx trial investigating pulse oximetry as a screening test for congenital heart defects in newborn babies. As a result of this work he was nominated for the Charles Beale Founder's Award for Excellence in Policy Development in May 2012. The study was included in the 2012 NIHR Evaluation, Trials and Studies annual report and was described as a 'Research Highlight' in the 2012 NIHR annual report and as 'a new milestone in the history of congenital heart disease' in a Lancet editorial. In 2015 the PulseOx study was selected as the entry for Birmingham University in 'Health of the Nation' published by the Medical Schools Council following REF 2014.

Qualifications

- MD – University of Birmingham 1998
- Fellowship of Royal College of Paediatrics and Child Health 1996
- Membership to the Royal College of Physicians 1989
- MB ChB – University of Birmingham 1985

Biography

Andrew Ewer qualified with a MB ChB in Medicine and Surgery from the University of Birmingham in 1985. He trained in Paediatrics in Birmingham and Sheffield and gained MRCP in 1989. He won a Sheldon Research Training Fellowship in 1991 and investigated gastric emptying and gastro-oesophageal reflux in preterm infants. Following this, in 1994 he won a Fellowship to Monash Medical Centre in Melbourne, Australia and continued his clinical training and research there. He returned to the Birmingham as Lecturer in Neonatal Paediatrics and was awarded FRCPCH in 1997 and an MD degree from the University of Birmingham in 1998. He was appointed as Senior Research Fellow and Honorary Consultant Neonatologist at Birmingham Women's Hospital, Senior Lecturer in 2009, Reader in Neonatal Paediatrics in 2012 and Professor of Neonatal Medicine in 2015.

His research interests include: neonatal gastrointestinal function (particularly gastric function and necrotising enterocolitis), neonatal cardiology and clinical trials.

He is an invited referee for 22 peer-reviewed journals and is an Associate Editor of the journal Archives of Disease in Childhood Fetal and Neonatal Edition. He is a member of the medical advisory panel of the British Association of Perinatal Medicine and a member of two national clinical studies groups; the Intrapartum Care CSG and the MCRN/AMR CSG. He is a member of the Trial Steering Committee for 6 national clinical trials.

In 2011 he was invited as an advisor to the United States Health Secretary's Advisory Committee on Heritable Disorders in Newborns and Children workgroup on Screening for Critical Congenital Cyanotic Heart Disease. Screening was subsequently endorsed by the US Health Secretary and is being implemented as national policy. Since 2012 he has been an advisor to the Newborn and Infant Physical Examination group on the UK National Screening Committee (NSC) and is currently a Board member of the NSC Pulse oximetry screening pilot programme which began in 2015.

Teaching

Teaching Programmes

- MB ChB
- Year 2 – Module on temperature regulation in newborns
- Year 5 – Coordinator of Neonatology teaching
- Examiner for final year Paediatrics

Postgraduate supervision

Andrew has supervised PhD and MD postgraduate students in laboratory and clinical research.

Research

RESEARCH THEMES

RESEARCH ACTIVITY

Gastrointestinal function in preterm infants

i) Gastric emptying

Using a novel ultrasonic technique Andrew investigated the effect of feed type on gastric emptying rates. While in Melbourne he investigated the effect of breast milk fortifier on gastric emptying.

ii) Gastro-oesophageal reflux

He also investigated the relationship between delayed gastric emptying and gastro-oesophageal reflux using techniques developed within the department. I also supervised a project investigating methods of detecting reflux and the effect of body position on the severity of reflux.

Necrotising enterocolitis

Andrew has collaborated with Professor Janice Marshall in the Department of Physiology at Birmingham University over a number of years and developed a unique animal model for necrotising enterocolitis and devised a research protocol and grant applications in order to investigate the role of inflammatory mediators (particularly platelet-activating factor) in the aetiology of the disease. He co-supervised 2 PhD students who were involved in both *in-vivo* and *in-vitro* work using this model.

In a recent collaboration with a team from Bristol University he have also been investigating faecal volatile organic compounds as a biomarker for NEC. This work successfully secured funding through an Action Medical Research project grant and Professor Ewer led the DOVE study, a multicentre trial which successfully recruited over 1300 preterm babies. Final analysis of the data is expected in summer 2015.

Neonatal cardiology

In collaboration with the Cardiology Unit at Birmingham Children's Hospital Andrew has supervised four Research Fellows in Neonatal Cardiology. They have investigated postnatal outcomes for babies diagnosed with congenital heart disease and developed the technique of tissue Doppler assessment of neonatal myocardial function.

Recently, in collaboration with the Clinical Trials Unit at Birmingham University he secured HTA funding and undertook a multicentre trial examining the use of pulse oximetry as a screening procedure to detect congenital heart disease in newborn babies.

Clinical trials

Andrew is PI on a number of national clinical trials and is actively involved in supporting local Obstetric and Fetal Medicine trials from a neonatal perspective.

Other activities

Neonatal Paediatrician on the Regional Neonatal Unit at Birmingham Women's Hospital delivering all aspects of clinical care to babies between birth and discharge from hospital.

Publications

Ewer AK (2014) **Pulse oximetry screening: do we have enough evidence now?** (<http://www.ncbi.nlm.nih.gov/pubmed/24768154>) *Lancet* 384(9945):725-6

Singh A, Rasiyah SV and Ewer AK (2014) **The impact of routine pre-discharge pulse oximetry screening in a regional neonatal unit** (<http://www.ncbi.nlm.nih.gov/pubmed/?term=The+impact+of+routine+pre-discharge+pulse+oximetry+screening+in+a+regional+neonatal+unit>). *Arch Dis Child Fetal and Neonatal Ed* 99(4):F297-302

Ewer AK, Granelli A, Manzoni P, Sánchez Luna M and Martin GR (2013) **Pulse Oximetry screening for critical congenital heart defects** (<http://www.ncbi.nlm.nih.gov/pubmed/?term=382%3A856-7>). *Lancet* 382(9895):856-7

Singh A and Ewer AK (2013) **Pulse oximetry screening for critical congenital heart defects: a UK national survey** (<http://www.ncbi.nlm.nih.gov/pubmed/23415303>). *Lancet* 381(9866):535

Thangaratnam S, Brown K, Zamora J, Khan KS and Ewer AK (2012) **Pulse oximetry screening for critical congenital heart defects in asymptomatic newborns: a systematic review and meta-analysis** (<http://www.ncbi.nlm.nih.gov/pubmed/?term=379%3A2459-2464>). *Lancet* 379(9835):2459-64

Ewer AK, Furnston AT, Middleton LJ, Deeks JJ, Daniels JP, Pattison HM, Powell R, Roberts TE, Barton P, Auguste P, Bhojar A, Thangaratnam S, Tonks AM, Satodia P, Deshpande S, Kumararatne B, Sivakumar S, Mupanemunda R and Khan KS (2012) **Pulse oximetry as a screening test for congenital heart defects in newborn infants: a test accuracy study with evaluation of acceptability and cost-effectiveness** (<http://www.ncbi.nlm.nih.gov/pubmed/?term=Pulse+oximetry+as+a+screening+test+for+congenital+heart+defects+in+newborn+infants%3A+a+test+accuracy+study+with+evaluation+of+acceptability+and+cost-effectiveness>). *Health Technol Assess* 16(2):1-184

Roberts TE, Barton PM, Auguste PE, Middleton LJ, Furnston AT and Ewer AK (2012) **Pulse oximetry as a screening test for congenital heart disease in newborn infants: a cost effectiveness analysis** (<http://www.ncbi.nlm.nih.gov/pubmed/?term=Pulse+oximetry+as+a+screening+test+for+congenital+heart+disease+in+newborn+infants%3A+a+cost+effectiveness+analysis>). *Arch Dis Child* 97(3):221-6

Ewer AK, Middleton LJ, Furnston AT, Bhojar A, Daniels JP, Thangaratnam S, Deeks JJ and Khan KS, PulseOx Study Group (2011) **Pulse oximetry as a screening test for congenital heart defects in newborn infants (PulseOx): a test accuracy study** (<http://www.ncbi.nlm.nih.gov/pubmed/21820732>). *Lancet* 378(9793):785-94

